Mississauga Hospital: largest evacuation in Canada's history

SARAH HENRY

The 1950 Winnipeg flood remains one of Canada's most serious civil emergencies. Over 100 000 people left their homes that spring in search of dry land. Several hospitals throughout the stricken area had to be evacuated, the patients sent to hospitals as far afield as Saskatoon and Regina. A young intern named Getchel Williams helped in the evacuation of St. Boniface Hospital. Like most of his contemporaries, he probably regarded the entire undertaking as a once-in-a-lifetime exercise.

At 11.56 pm on Nov. 10, 24 of the 106 railcars on CP Train 54 derailed in Mississauga, a bedroom community on the western outskirts of Toronto. Thus began the largest evacuation in Canada's history. The train had been carrying a lethal combination of toxic and flammable goods; propane, butane, caustic soda, styrene and toxic solvents — as well as 80 tonnes of liquid chlorine. Within 24 hours, 250 000 residents had completed an exodus from the area. A leaking chlorine tanker beside the blazing train continued to pose a deadly threat for the next 5 days.

Dr. Getchel Williams, chief of staff at Mississauga Hospital, had a second major evacuation on his hands.

But it was several hours after the train mishap before Williams or anyone else at the Mississauga Hospital had any inkling that evacuation might be necessary.

Which is not to say they weren't expecting the worst. When news of the derailment reached the hospital shortly after midnight, the hospital immediately went on disaster alert, in expectation of a large casualty load from the train accident.

By 2 am that Sunday the staff heaved a collective sigh of relief. "It was obvious that the accident had been in an industrial area. The only casualties we would get would be firemen or police. At this point we really thought it was only a fire," recalls Merritt Henderson, president of Mississauga Hospital.

Shortly after, Peel Region police and Metro Toronto ambulances moved into a 2.6 km^2 area downwind from the propane blaze, warning residents they were in immediate danger from chlorine gas fumes and directing the evacuees to an area shopping centre. Slowly the evacuated area widened. But the hospital heard nothing.

Then at 6.30 am, the physician on duty in the emergency department awoke Henderson to say three patients had just been brought in by families who were heading for evacuation centres and couldn't take their elderly relatives with them. It was agreed the best course would be to open the day surgical unit, if necessary, to accommodate any more unexpected visitors.

Henderson arrived at the hospital at 7.00 am; Williams half an hour later. At 7.30 am, Peel Region police chief Douglas Burrows called to say the hospital should consider itself on evacuation alert.

"That's the first I knew about the chlorine leak," says Henderson. "The police also said an order had been issued to begin moving ambulances into the area of the hospital in case of an evacuation order."

Preparations began. During the night, there had been a few surgical cases, a cesarian section and one fresh coronary. An orthopedic case was waiting to go to the operating room. But as on most Sundays, there was a hiatus in the busy life of the hospital. "There's a large discharge on Saturday and it isn't until Sunday afternoon that we start to take elective patients back in. So if you had to pick a time

Ambulance drivers wait for word to begin evacuation.

for evacuation, Sunday morning would be it," says Williams.

Key people were called in to help empty the hospital. Among these was the chief engineer, to provide vital counsel on the continued operation of the ventilation system. Members of the hospital auxiliary began the time-consuming task of contacting patients' relatives. Attempts were made to reach the Mississauga General's 264 doctors to bring them up to date.

Tailoring the plan

The standard disaster plan had to be modified to suit an evacuation. The list of people to be called in case of emergency was used with discretion, since these people would themselves ultimately have to be evacuated; on the other hand extra medical help was required to assess and help patients leaving the hospital.

Patients who normally would have been sent home that day were discharged early. Buses and family cars began arriving at 8 am. The nursing staff began preliminary assessment of patients to determine who would have to be transferred to other hospitals, who could go home.

Hospital staff also called around to other hospitals to find out how many beds could be spared: "This is one of the things that must be sorted out in the future," says Henderson. "I was making a few of the calls when the nurses got jammed up with other preparations. The hospitals had the information right at the tips of their fingers, which made me a little suspicious. I asked them how they knew so quickly and they told me the ambulance dispatch centre had called 10 minutes earlier. We stopped calling around at that point."

The business of juggling beds and finding extra hospital accommodation — tricky at the best of times — took on added complexity. (Consider this hospital administrator's nightmare: at the start of the evacuation, there were 478 patients in residence at Mississauga Hospital. It was determined that 292 could go home and 186 would go to other hospitals. Eight hospitals — Oakville, Brampton, Hamilton and Toronto — offered to provide beds. Two of them — the Queensway General and the Oakville-Trafalgar Memorial — also faced evacuation later that day. When the Oakville hospital received the request from the Mississauga Hospital on Sunday morning it had 22 empty beds, then discharged a further 67 patients to create more free space. A total of 50 Mississauga patients had entered the hospital by early afternoon. At 10.45 that evening when the Oakville-Trafalgar Memorial itself went on evacuation standby, a further 69 patients were sent home, and 217 patients — including the 50 who had come from Mississauga earlier that day — were transferred to four Hamilton hospitals; eventually, the Mississauga Hospital patients were distributed to 10 area hospitals.)

Meanwhile, workers at the Mississauga Hospital, in the midst of phoning around for hospital beds, bringing in staff, and assessing patients still had no idea whether they were going through the motions of a disaster exercise or whether there really was going to be an evacuation.

At 9.20 am two ambulance drivers, one from Mississauga, one from Toronto, walked into the chief administrator's office and asked where they should begin.

Outside, 62 ambulances were waiting to receive patients.

Still no official word

"We still hadn't had any official word," says Henderson. "The chief of police had said he'd call me back and we certainly didn't want to start evacuating the hospital on hearsay." Nevertheless, the hospital decided to begin moving the critically ill and prematures.

Moments later, a phone call to the police station revealed that the police chief was in a helicopter high over the disaster scene. But the deputy chief was able to confirm that the evacuation order had, in fact, gone out — even if the hospital hadn't heard.

Before the evacuation began, two doctors went to each of the hospital's five floors and, with nursing staff, identified the patients who should be moved first. The mass departure then began on the top floor and moved down.

"As we came down we were getting more and more personnel," recalls Williams. "It was clear we didn't need to bring on any more staff because we had enough already. It's the reverse to a disaster plan. When you evacuate a hospital, you try not to bring people in. We were ending up with more and more as we came down."

Initially, two discharge areas were set up, each manned by a doctor and nursing staff. Transfers were handled through the emergency department while the day care and surgery areas were reserved to evacuate patients who were returning home. At the transfer exit, the staff would tell the ambulance driver where to take the patient and hand over the patient's chart, while another staff member logged the information.

No traffic tie-ups

Because police had cordoned off the area around the hospital, relatives faced no traffic tie-ups when they came to pick up patients. "It went much better than we anticipated," says Andrew Sarne, director of the hospital's emergency department. "One of our concerns in our disaster exercises has been the congestion as relatives come in to pick up patients to take them home; normally, we'd be looking at 60 or 70 people going home to accommodate that number of casualties. Here we had 292 going home."

The transfer to other hospitals also worked well, says Williams. "For the first four or five patients we didn't send charts. We didn't want to let our records get away from us. Then it became obvious that there wouldn't be enough time to provide more than a short note for each patient." Despite one ambulance changing course en route and the two largest receiving hospitals — the Queensway General and the Oakville-Trafalgar Memorial — both being evacuated later that day, all charts were subsequently returned, he says.

It may sound like a smooth eva-

←for prescribing information see page 568

cuation exercise, but there were rocky moments: "We couldn't use the telephone too much because the lines were jammed with calls, so we sometimes got a bit of a backlog as patients came down on the elevators to the evacuation doors," says the chief of staff.

"If we had to do it again, we would have some sort of internal communication system so that if we started to pile up at the doors, we could hold other patients back at their floors. I and some of the others had to run back between the floors trying to keep the movement at a reasonable rate."

To speed up the process downstairs, a second exit was established to alleviate the bottleneck. "In the case of a disaster, we expect to send patients home to make room for casualties through the west side of the hospital. Then we can bring the casualties in through emerg," says Henderson. "We sent the evacuees out through emerg and then we established another exit over on the east side of the building. It started to work much better."

At 1 pm, 3½ hours after it had started, the evacuation was complete. Throughout the afternoon, the staff of the hospital made their departures.

Anxiety builds

The emergency department stayed open until 11 that evening. "Then some of the doctors and other staff started getting nervous," Sarne remembers. And so, all patient services at the hospital were closed.

Later that night Sarne went over to the police department and got a pass so he could get past the roadblocks whenever necessary.

He acted as a liaison officer between the hospital and doctors, a difficult task since most physicians couldn't be found and hadn't realized that one line to the hospital had been left open.

As a result of the communications problems experienced during the evacuation, the hospital has set up a central communication system for emergencies. "The doctors had scattered like everyone else and they didn't know where to call," says Williams. "Some of the doctors set up satellite areas around the periphery to take care of patients. But we had no way of knowing all this except by listening on the air."

The real problems began on Tuesday, says Sarne, when residents living on the outermost fringe of the evacuated area returned to their homes. "A lot of patients were left high and dry when they returned. People who were elderly or who got sick had nowhere to call because the doctors' answering services had been knocked out."

Local doctors pitch-in

A number of doctors in the area got together to perform emergency services at the Applewood Hills Medical Centre, which acted as a home away from home for the Mississauga General's emergency department. Physicians carried on normal rotation, life support equipment was available and an ambulance was standing by to take patients, if necessary, to the emergency department of the Queensway General Hospital. Although the Queensway had been evacuated on Sunday afternoon when a wind shift had sent chlorine fumes in its direction, the emergency department remained open.

The satellite emergency department handled a number of cases, says Sarne, although many patients were sent to about six group practices that were treating patients on either side of the evacuation zone.

On one occasion Sarne visited the central command post at the disaster site to offer help from the emergency physicians. "But they didn't seem all that keen on getting anybody. I think we should be able to provide outside field service."

Williams agrees that better communication is needed. "As a medical group in the area, we were kept pretty much in the dark. We really didn't know what was going on. There was no attempt made to contact me as chief of staff. We did check in regularly and they could have reached me through Mr. Henderson."

The Mississauga Hospital administrators, realizing that when the evacuation order was lifted people would expect a fully functioning hospital, contacted the command post to ask for advance warning.

The call came late on Friday afternoon. "They wouldn't come right out and say it, but the inference was the evacuation would probably be lifted that night." Staff members would be allowed through the roadblocks at any time to reach the hospital.

The administrators called a final meeting to review their plans. During the meeting the evacuation was lifted.

When Sarne left the Mississauga Hospital emergency department at 10 pm on Friday, the first visitor had already arrived, though service wasn't scheduled to resume until 10 the following morning.

Babies as usual

But by 9 am on Saturday morning, even before the barricades were down, the first visitors were waiting for treatment. A maternity patient on her way to the Queensway General headed for the Mississauga as soon as she heard it was open. Her baby was delivered at 10.30 on Saturday morning.

By Saturday afternoon, when hospital back-up services had reopened, 10 maternity patients were transferred from Queensway General to Mississauga Hospital since a number of doctors who had privileges at both hospitals had been delivering babies at the Queensway. About six psychiatric and six chronic care patients also returned to the hospital from their homes. "It was a good beginning of a census," says Henderson.

Later that day, senior staff got together to plot their strategy for bringing patients back. The evacuation procedure was reversed: patients were brought back starting in Toronto and moving west, one hospital at a time.

By Sunday, there were 90 patients. Then the normal elective patients began to stream in Sunday evening.

By Monday, the hospital population had reached 200.

It was business as usual by Tuesday. ■